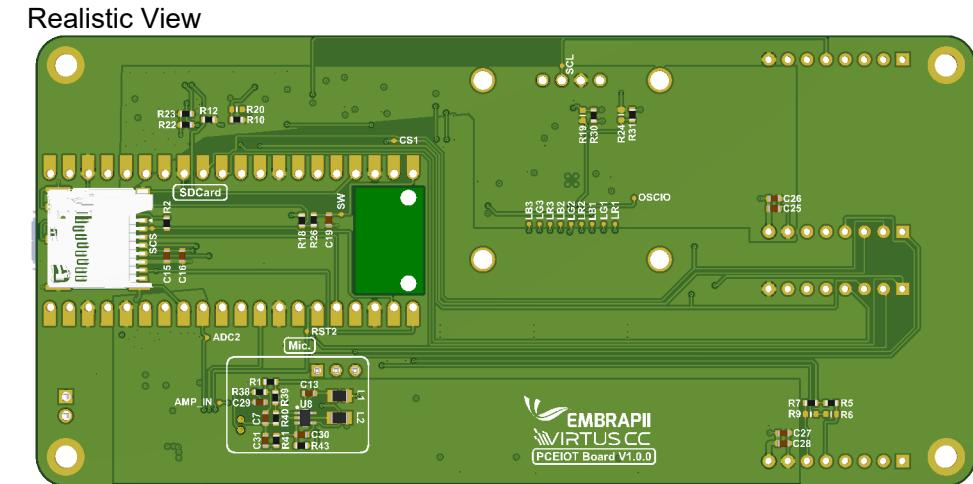
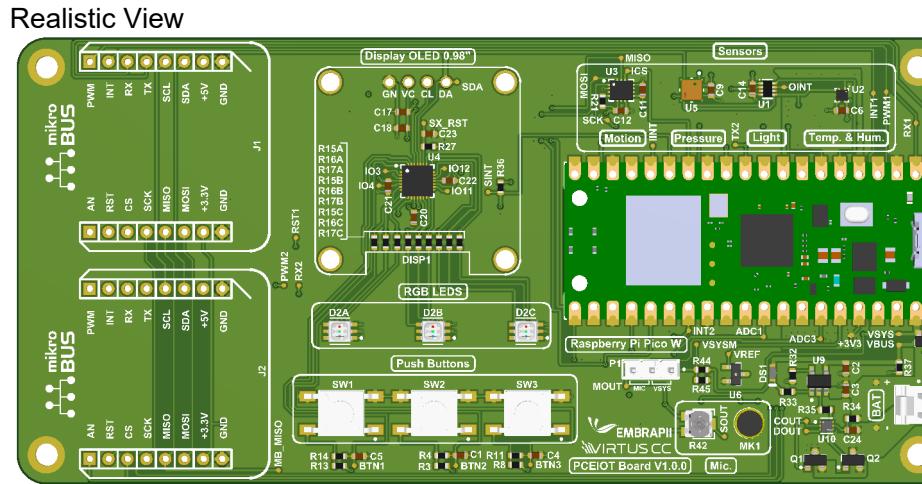
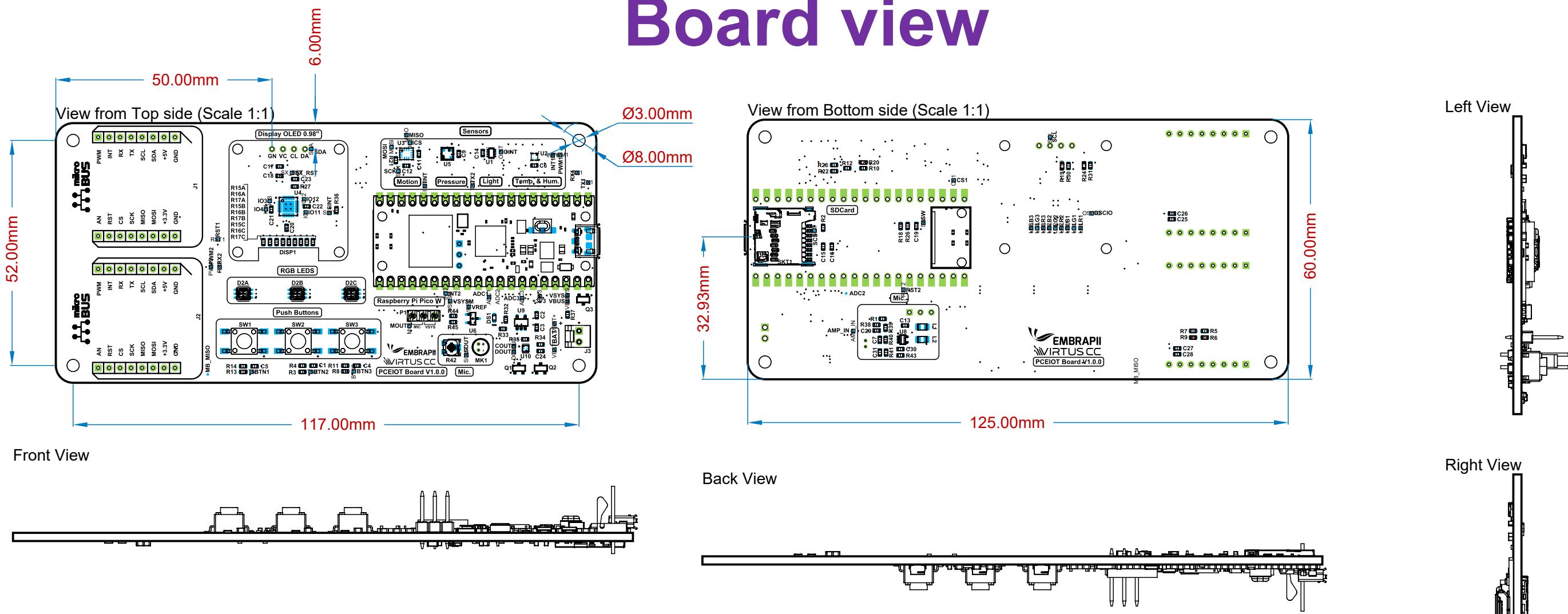


PCEIoT V1.0.0

Variant: Fabrication

Board view



	ADDRESS R. Aprígio Veloso, 882, Universitário Campina Grande - PB 58429-900
PROJECT Heloysa Veloso - PCEIoT.PrjPcb	VERSION V1.0.0
TITLE Drafsman.PCBDwf	SIZE A3 SCALE 1:1
DOCUMENT NAME: Drafsman.PCBDwf	SHEET:
DOCUMENT REVISION:	1 OF 3
PROJECT REVISION: V1.0.0Control_ProjFolderRevNumberShort	

A

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C

D

E

F

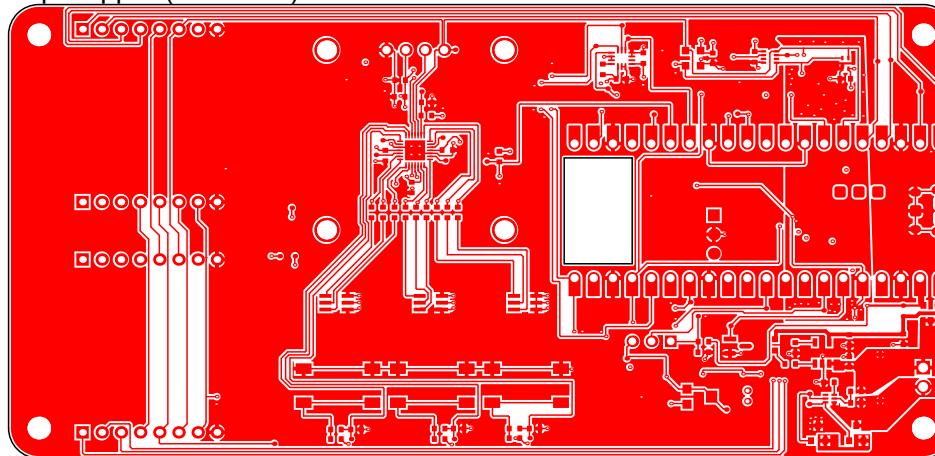
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H

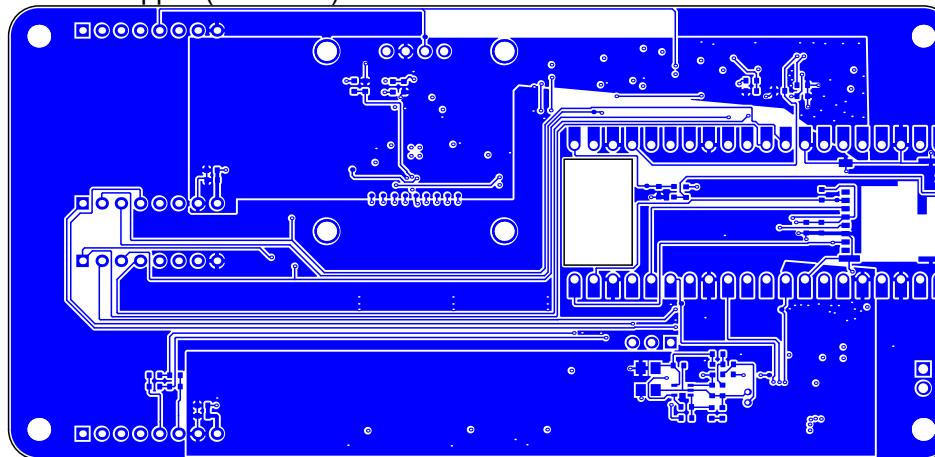
REVISION	DESCRIPTION	DATE	APPROVED

Layers, Stack and Drill Drawings

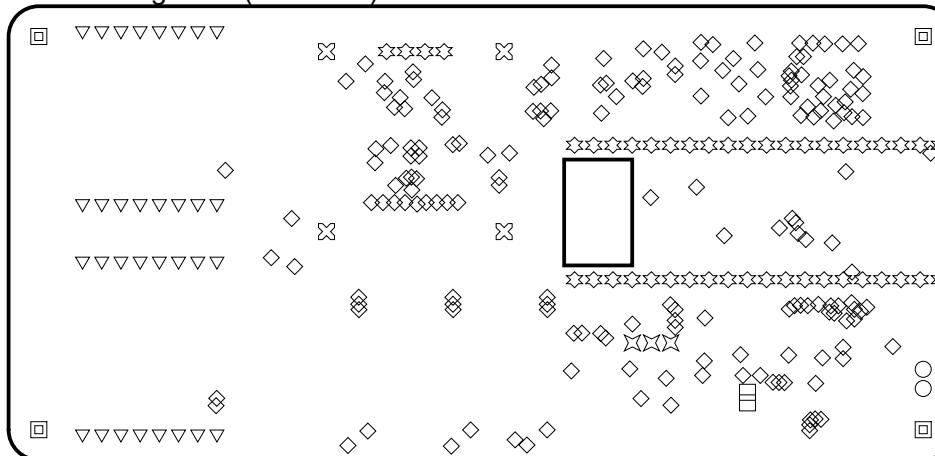
Top Copper (Scale 1:1)



Bottom Copper (Scale 1:1)



Drill Drawing View (Scale 1:1)



Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
Surface Material	Top Overlay	0.03mm	Solder Resist	Legend	GTO
Copper	Top Mask	0.04mm	Solder Mask	GTS	GTL
Prepreg	Top Copper	0.21mm	7628	Signal	GTL
Copper	Top Ref	0.02mm		Internal Plane GP1	
Core		1.06mm	FR-4	Dielectric	
Copper	Bottom Ref	0.02mm		Internal Plane GP2	
Prepreg		0.21mm	7628	Dielectric	
Copper	Bottom Copper	0.04mm		Signal	GBL
Surface Material	Bottom Mask	0.03mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO
Total thickness: 1.65mm					

Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
◇	187	0.20mm	Plated	
□	2	0.55mm	Plated	
▽	32	0.89mm	Plated	
☒	3	1.02mm	Plated	
❖	44	1.10mm	Plated	
○	2	1.30mm	Plated	
☒	4	2.50mm	Plated	
□	4	3.00mm	Plated	
278 Total				

	ADDRESS	
	R. Aprígio Veloso, 882, Universitário Campina Grande - PB 58429-900	
PROJECT	Heloysa Veloso - PCEIoT.PrjPcb	VERSION
		V1.0.0
TITLE	Drafsman.PCBDwf	SIZE
		A3
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DOCUMENT REVISION:		SHEET:
		2 OF 3
PROJECT REVISION:	V1.0.0Control_ProjFolderRevNumberShort	

A	B	C	D	E	F	G	H		
						REVISION	DESCRIPTION	DATE	APPROVED

Bill of materials

Bill Of Materials

Line #	Designator	Name	Quantity
	C1, C4, C5, C19	VJ0603Y103KXAAAC	4
	C2, C3	Capacitor 4.7µF +/-20% 10V 0603	2
	C6, C7, C9, C11, C12, C13, C14, C15, C16, C17, C18, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29	VJ0603Y104MXJCW1BC	21
	C30	C0603C101K5GACTU	1
	C31	GRM188R60J106ME47D	1
	D2A, D2B, D2C	ASMT-YTB7-0AA02	3
	DS1	19-217/R6C-AL1M2VY/3T	1
	J3	640456-2	1
	J4, J5	61302011821	2
	J6, J7, J8, J9	61300811821	4
	L1, L2	BLM21PG331SN1D	2
	M1, M2, M7, M8	709670110	4
	M3, M4, M9, M10	970080354	4
	M5, M6, M11, M12	MPMS 003 0005 PH	4
	MK1	CMEJ-0415-42-LP	1
	P1	22-28-4033	1
	Q1, Q2, Q3	NTRV4101PT1G	3
	R1, R38, R41, R45	Resistor 1k +/-1% 0603 100 mW	4
	R2, R3, R4, R8, R11, R12, R13, R14, R18, R21, R22, R23, R26, R27, R36, R37, R44	Resistor 10k +/-1% 0603 100 mW	17
	R5, R7, R10, R30, R31	Resistor 0R +/- 5% 0603 100 mW	5
	R15A, R15B, R15C	CRCW0603150RFKEA	3
	R16A, R16B, R16C, R17A, R17B, R17C	CRCW060350R0FKEA	6
	R32	ERJ-3EKF2001V	1
	R33	CRCW0603470RJNEA	1
	R34	ERJ-3EKF3300V	1
	R35, R43	CRCW06032K20FKEA	2
	R39, R40	Resistor 100k +/-1% 0603 100 mW	2
	R42	TC33X-2-104E	1
	SKT1	5033981892	1
	SW1, SW2, SW3	FSM4JSMA	3
	U1	OPT4001DTSR	1
	U2	SHT40I-AD1B-R3	1
	U3	ICM-42670-P	1
	U4	SX1509BIULTRT	1
	U5	MS563702BA03-50	1
	U6	LM4040DYM3-2.5-TR	1
	U7	SC0918	1
	U8	MAX4466EXK-T	1
	U9	MCP73831T-2ACI/OT	1
	U10	BQ29700DSER	1

Bill Of Materials (NF)

Line #	Designator	Name	Quantity
	DISP1	0.96" Display Module	0
	J1, J2	MikroBus Connector	0
	R6, R9, R19, R20, R24	Resistor 0R +/- 5% 0603 100 mW	0

	ADDRESS	
	R. Aprígio Veloso, 882, Universitário Campina Grande - PB 58429-900	
PROJECT	Heloysa Veloso - PCEIoT.PnjPcb	VERSION
DOCUMENT NAME:	Draftsman.PCDBdwf	V1.0.0
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		3 OF 3

Project Name:

Projeto de Circuitos Eletrônicos para IoT V1.0.0

Released 19/12/2025

Page	Contents
1	Table of contents
2	System block diagram
3	Top level hierarchical connections
4	Sensors
5	Board buttons and LEDs
6	RGB LED
7	Battery power management
8	Connectors
9	Mechanical components

Design Notes

Example of informational notes.

Example of cautionary design notes.

Example of critical design notes.



ADDRESS
R. Aprígio Veloso, 882, Universitário
Campina Grande - PB
58429-900

PROJECT
Heloysa Veloso - PCEIoT.PrjPcb

VERSION
V1.0.0

TITLE
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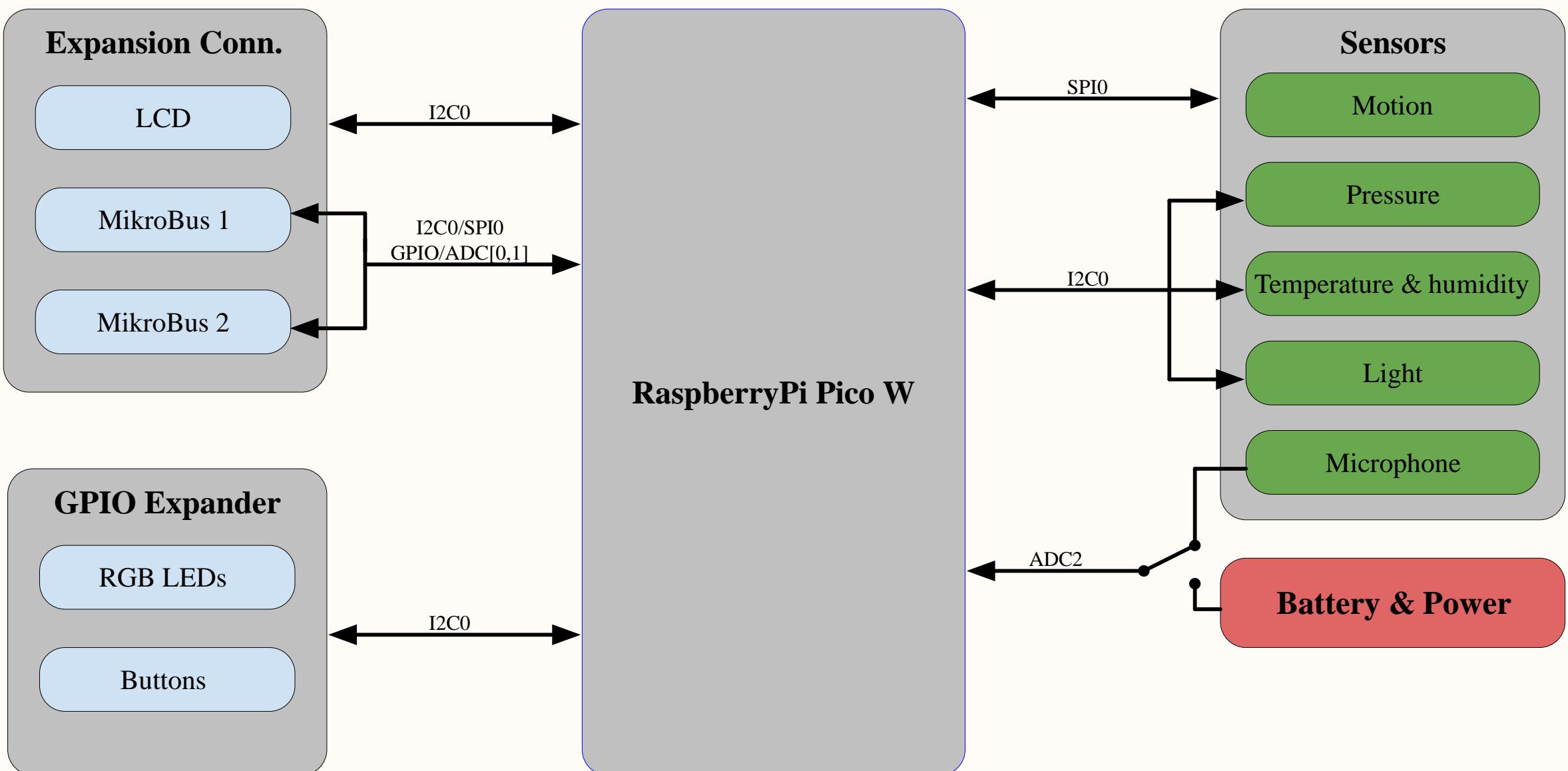
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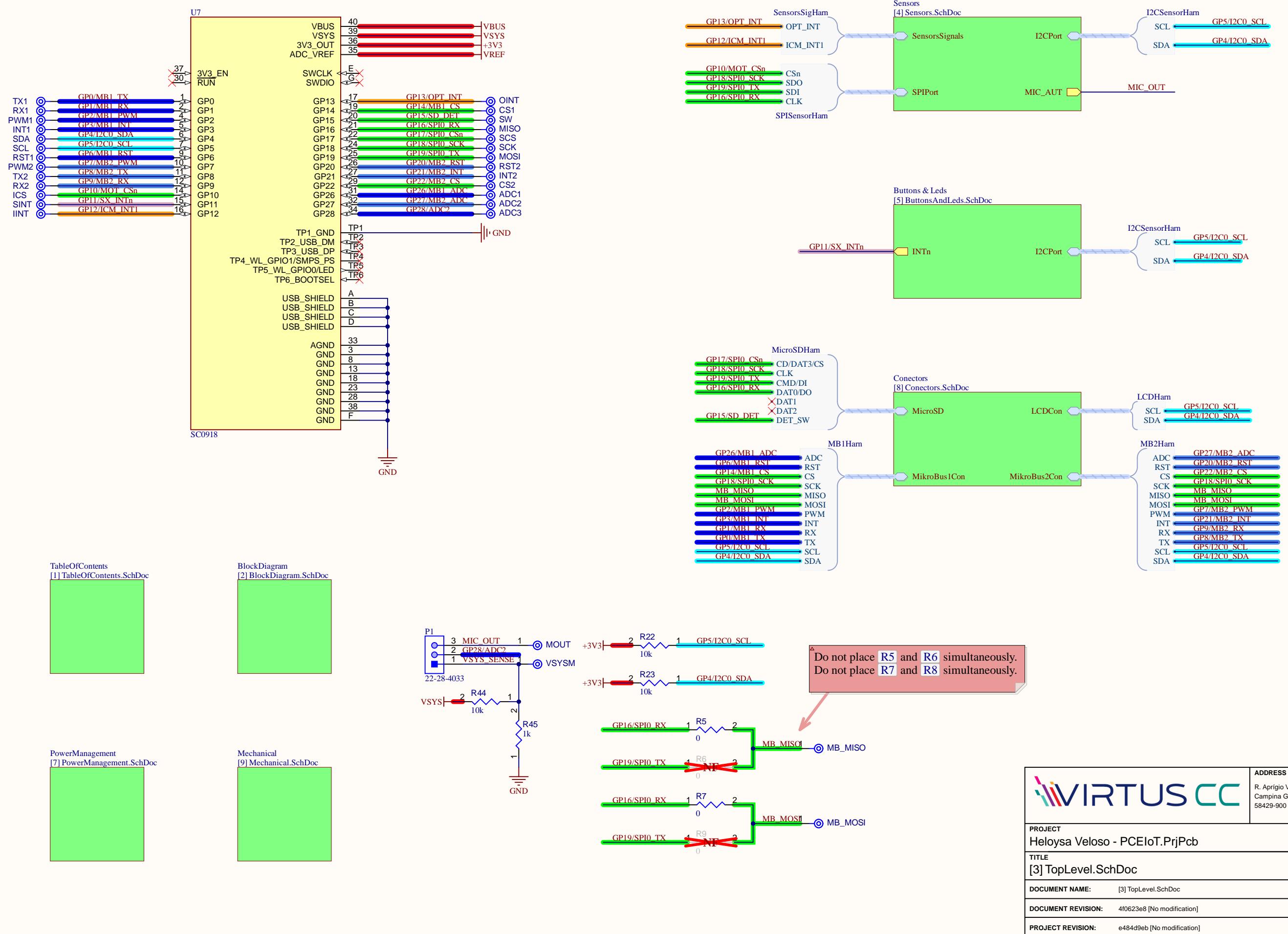
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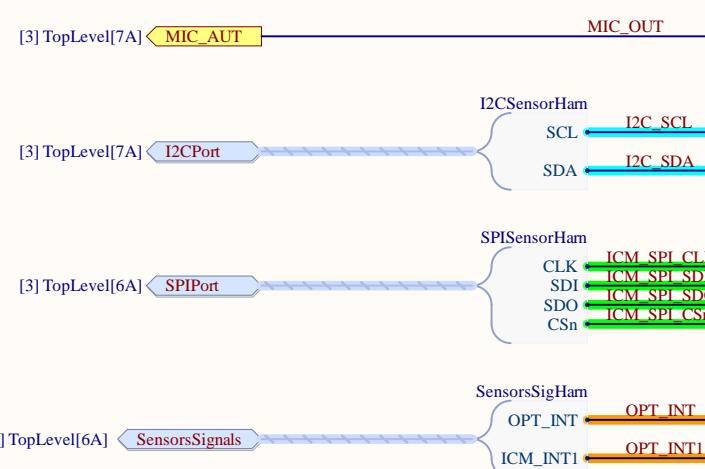
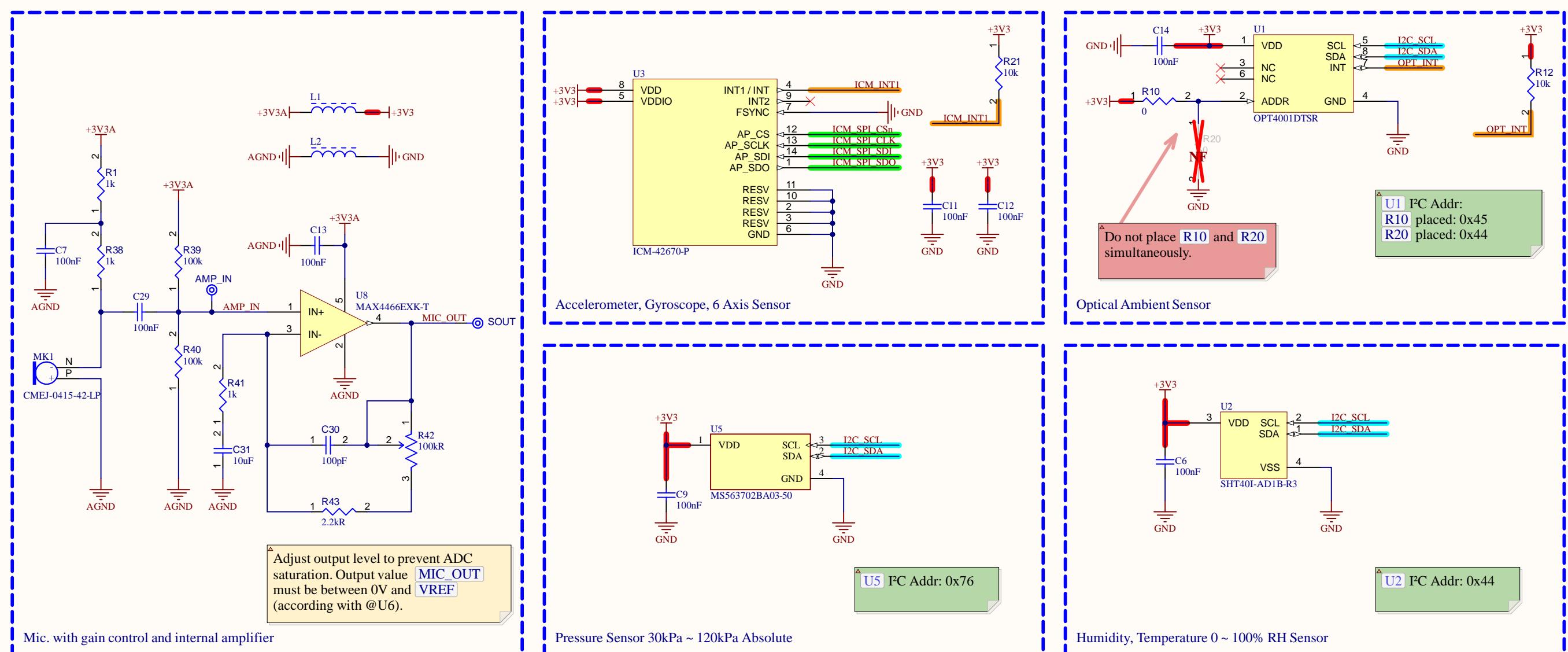
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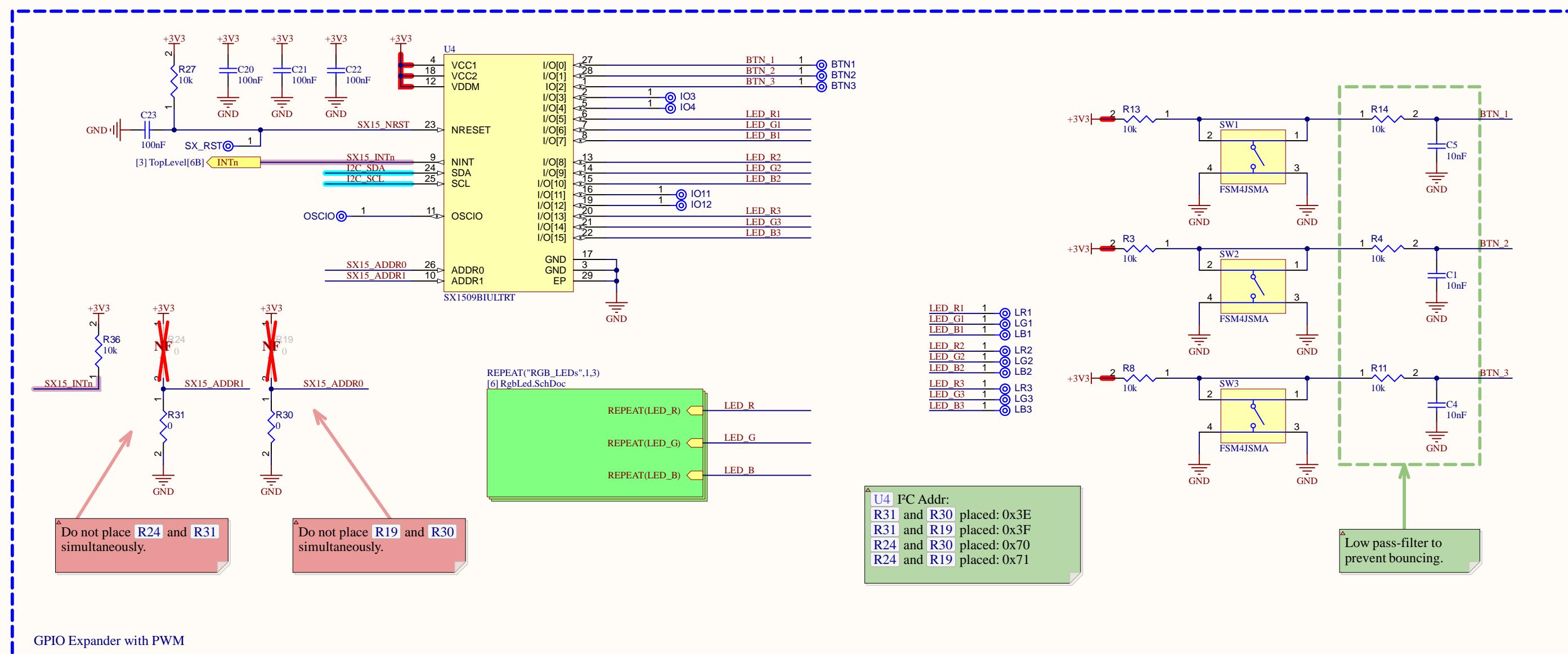
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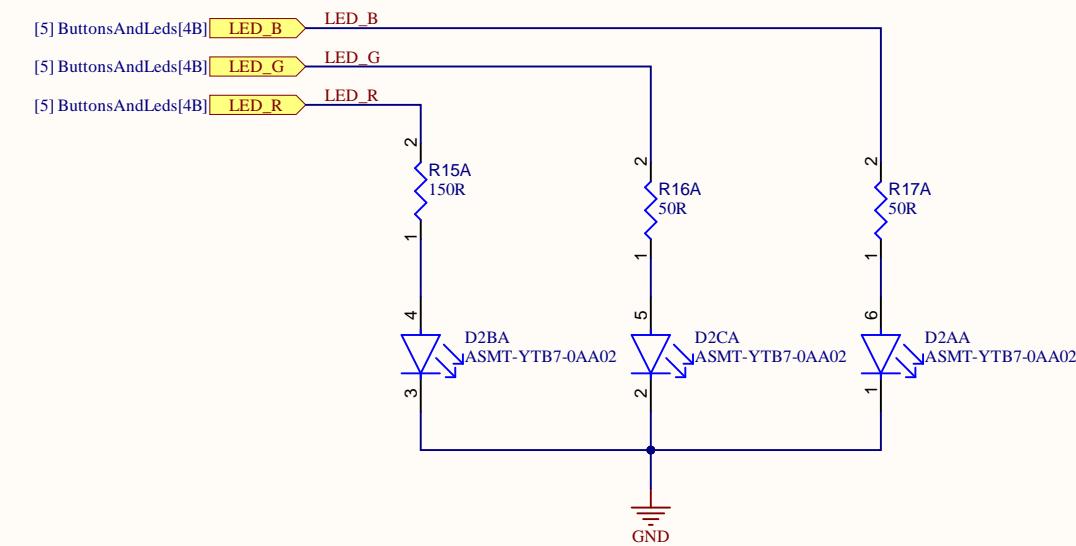
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▲ **R15**, **R16** and **R17** calculated based on voltage drops for each LED for a same current amount for 10mA.

	ADDRESS		
	R. Aprígio Veloso, 882, Universitário Campina Grande - PB 58429-900		
PROJECT	Heloysa Veloso - PCEIoT.PrjPcb		VERSION
	V1.0.0		
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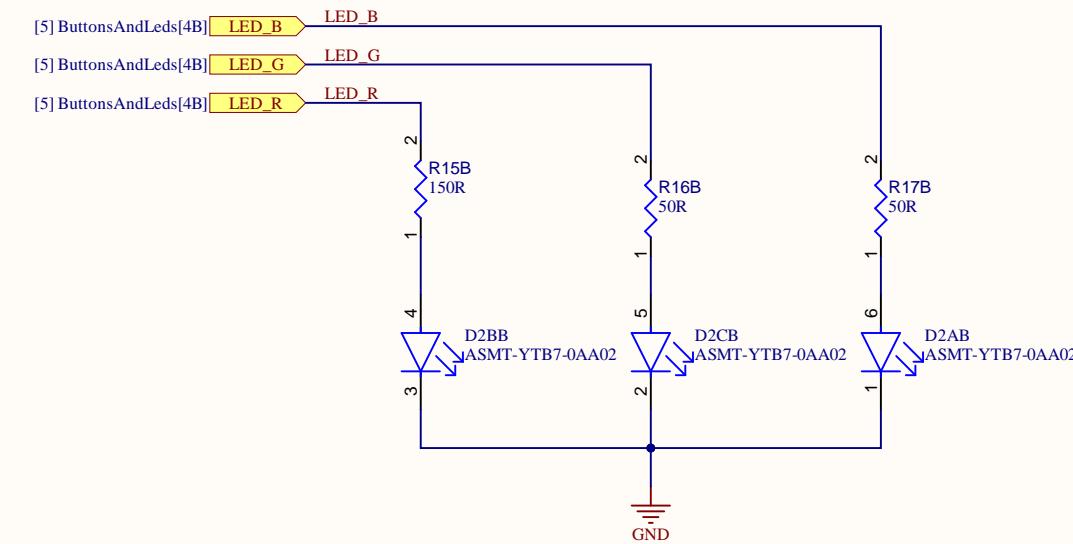
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▲ **R15**, **R16** and **R17** calculated based on voltage drops for each LED for a same current amount for 10mA.

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PROJECT Heloysa Veloso - PCEIoT.PrjPcb		VERSION V1.0.0
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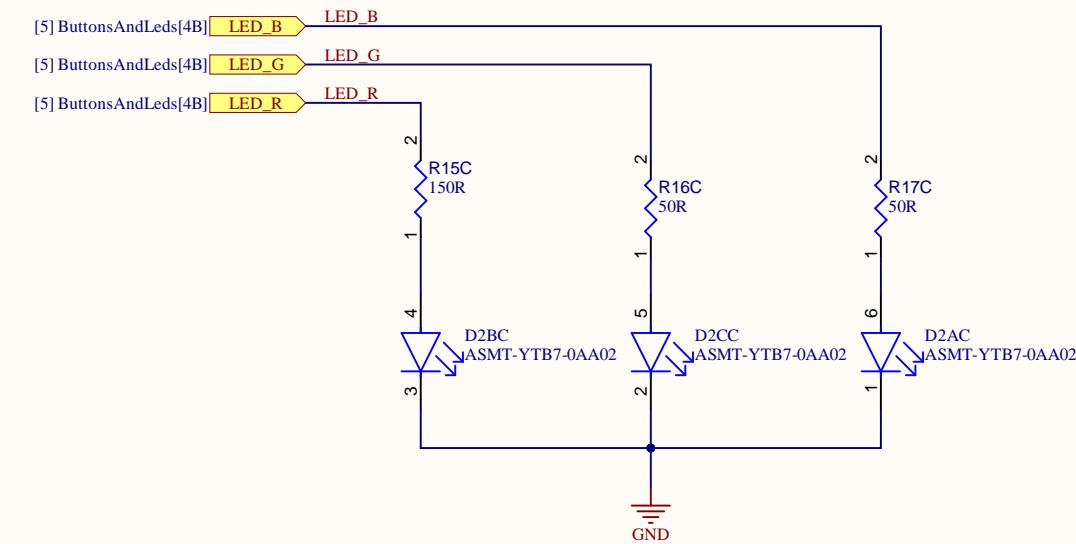
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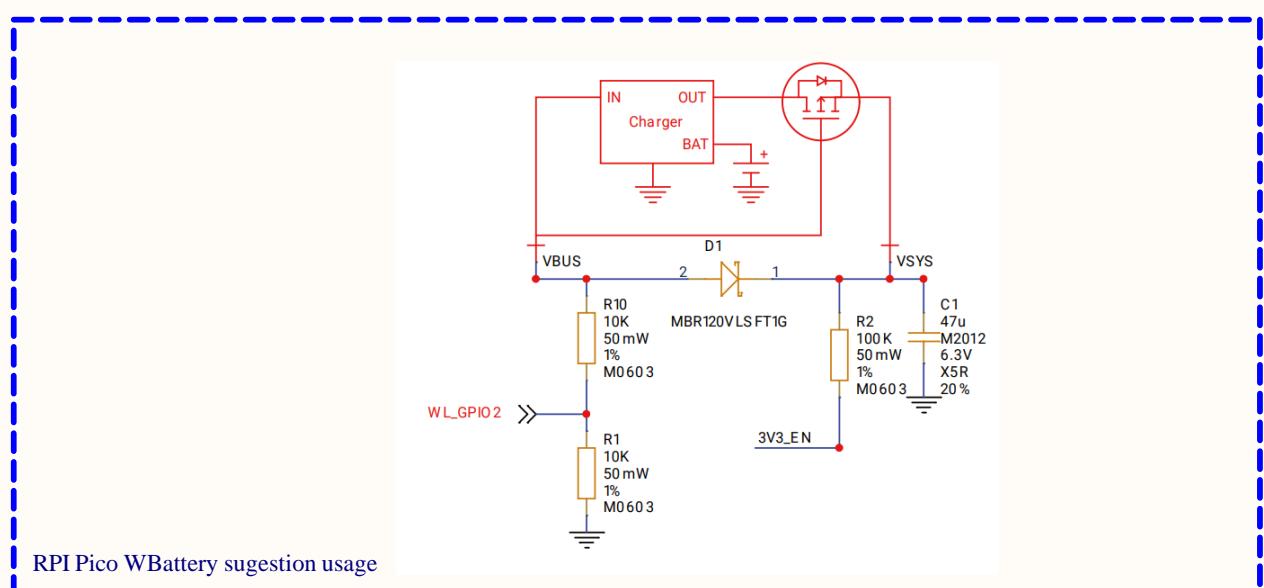
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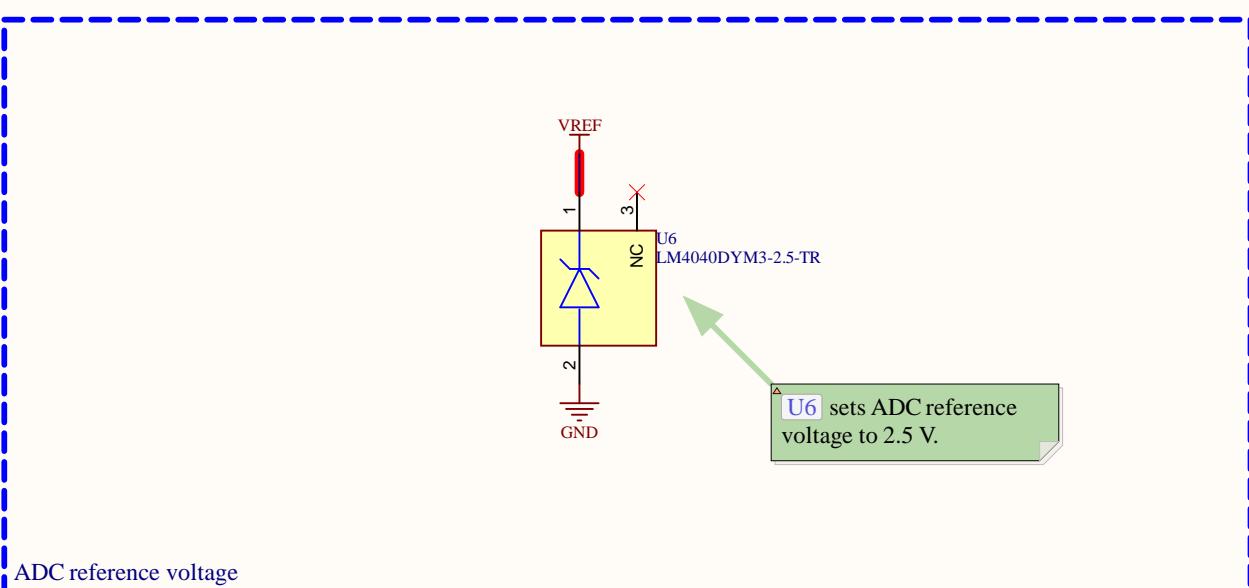
▲ **R15**, **R16** and **R17** calculated based on voltage drops for each LED for a same current amount for 10mA.

		ADDRESS R. Aprígio Veloso, 882, Universitário Campina Grande - PB 58429-900
PROJECT Heloysa Veloso - PCEIoT.PrjPcb		VERSION V1.0.0
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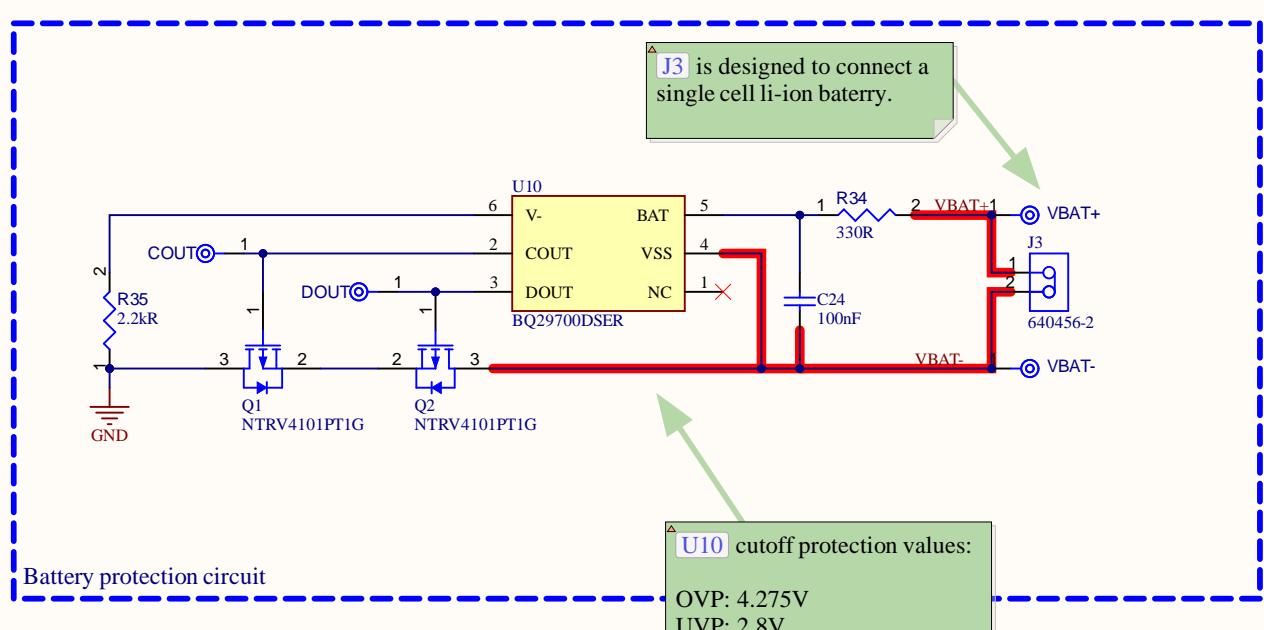
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 VSYS | 1 | VSYS
 VREF | 1 | VREF



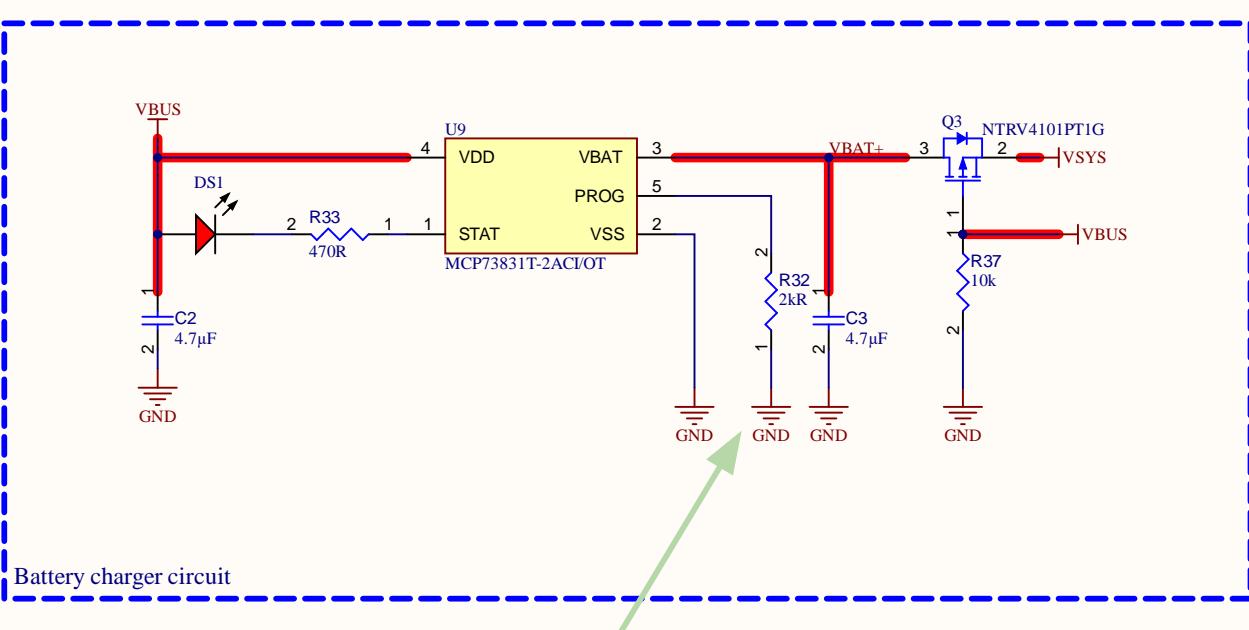
RPI Pico WBattery suggestion usage



ADC reference voltage

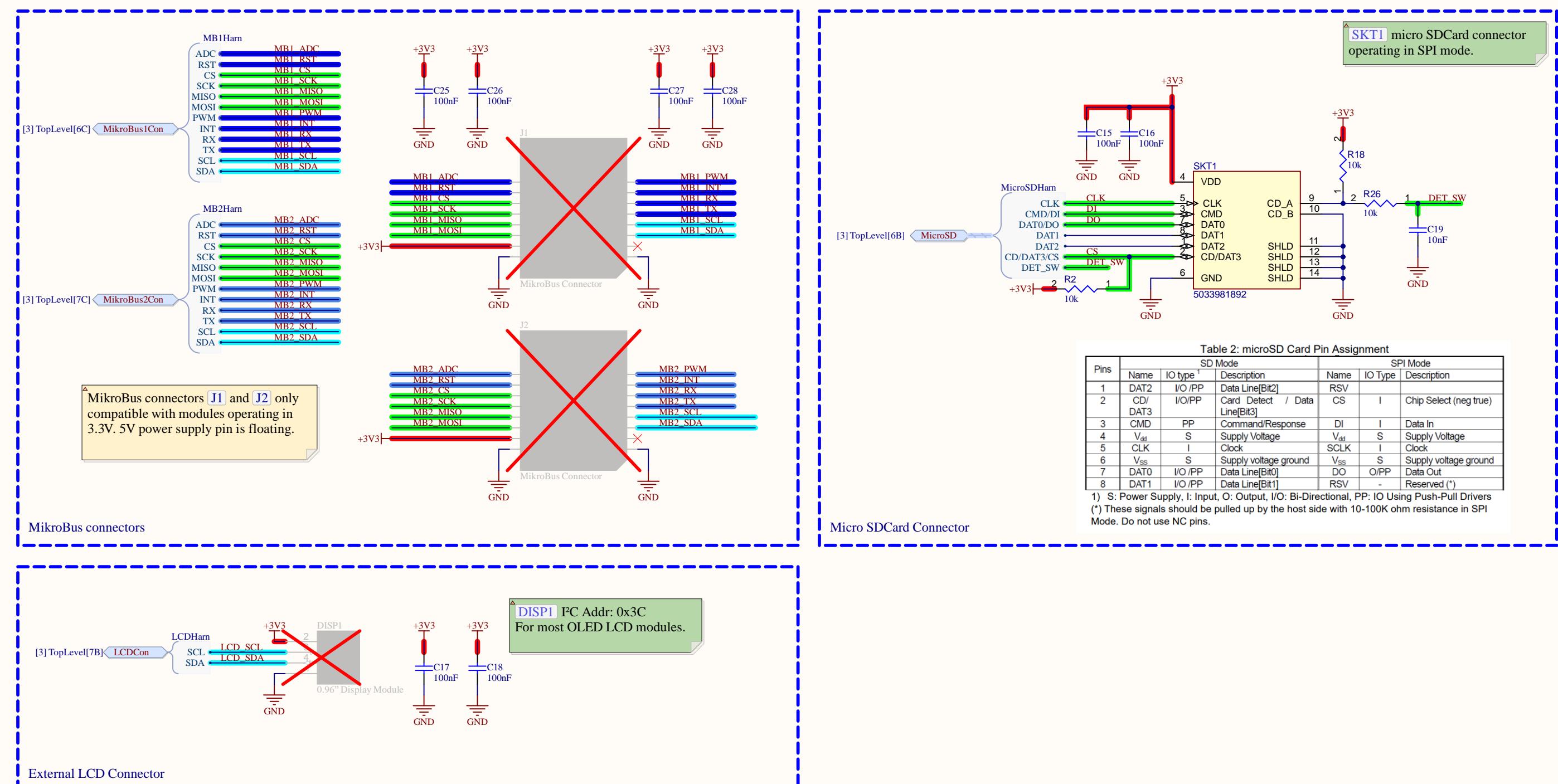


Battery protection circuit



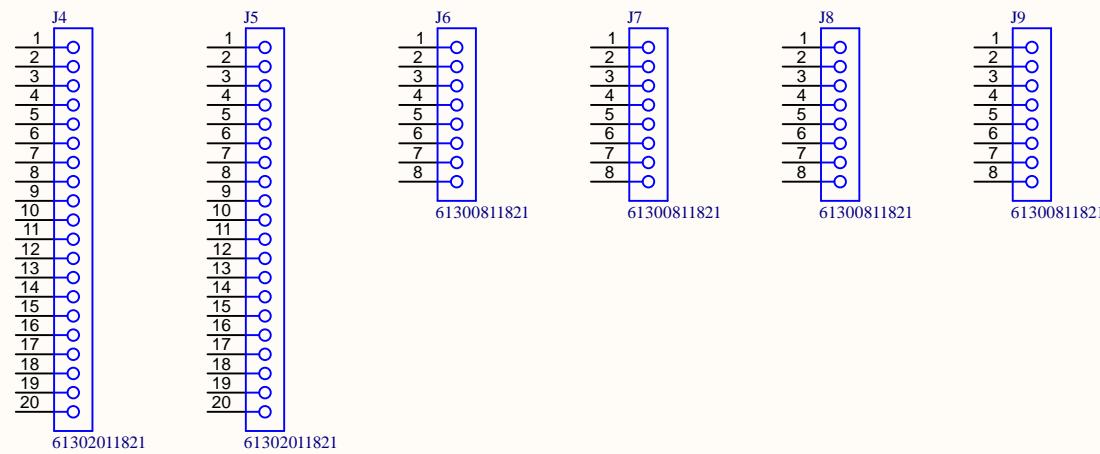
Battery charger circuit

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